

Which Is.....Oldest?

The July 1973 issue of the Field Artillery Journal included an article by Ensign Donald G. White which stated that the Newport Artillery Company "is acknowledged to be the oldest continuous commissioned military unit in the United States." In a letter published in the January-February 1974 issue of the Journal, LTC Roy C. Goff, commander of the 1st Bn, 201st FA, West Virginia National Guard, informed us that the 201st was the older of the two units. LT Martin J. Dwyer, a member of the Newport Artillery Company, wrote the Department of Military History to request adjudication. LT Dwyer was kind enough to provide us a copy of his letter. We have published it along with the reply from the Department of History.

From: 1LT Martin J. Dwyer, Artillery Company of
Newport, Rhode Island Militia
To: US Army Center of Military History, Washington,
DC 20315
Subj: Historical Data
Encl: (1) Copy of letter published in Field Artillery
Journal, Volume 42, Number 1
(2) Copy of charter published in book form in
1858

The Artillery Company of Newport in the State of Rhode Island and Providence Plantations is always glad to hear about other oldtimers but still insists upon its claim to being the "oldest unit with continuous service" over that of the 1st Battalion, 201st Field Artillery.

a. The 1st Battalion, 201st Field Artillery, West Virginia Army National Guard, states it has a statement of lineage and honors showing its lineage back to 17 February 1735.

b. The 3d Infantry claims to be the "oldest unit with continuous service in the Active Army." I don't know whether they consider National Guard or organized militia as "inactive."

c. The 1st Company, Connecticut Governor's Foot Guard, claims to be the "oldest unit with continuous service in the United States" and is supported by a statement of such signed by President Nixon in 1971. (The company was organized in 1771.)

d. The 1st Battalion, 211th Field Artillery, Massachusetts National Guard, has a statement of lineage

and honors showing lineage back to 5 March 1638 and that it was organized by Captain Myles Standish (State Adjutant General or equivalent), and this statement is signed by Major General J. C. Lambert, Adjutant General, US Army. The statement does not list any discontinuities of service, but the unit claims to be only the *third* oldest unit in the State of Massachusetts.

The 1/211 realizes that prior to the Revolutionary War, all military units organized and chartered were so done by the authority of the King of England. Rebelling against this authority revoked their charter, and therefore a discontinuance of service exists, even though the name of the unit persisted and officers and men remained under arms.

The Artillery Company of Newport (Newport Artillery), chartered in 1741 under the authority of King George II of England, was assigned the mission of "nursery of skillful officers . . . for the whole Militia." (Oldest artillery school with continuous existence? Oldest service school with continuous existence?) The company never fought against the British as a unit. Members of the company served with other commands, but the unit never violated its charter. When the British evacuated the Island of Rhode Island, they removed all public records (including the Artillery Company files), and due to the misfortunes of war, this particular ship sank near New London, Connecticut. From private papers, a list of the

continued on page 42

PERSHING

in Europe



by
SP5 Alan C. Jacobson

The officers and men of Pershing units in Europe play an important role in the NATO umbrella of defense.

The parent organization for Pershing in Europe is the 56th Field Artillery Brigade, a command assigned directly to USAREUR and located in Schwaebisch Gmuend, about 30 miles east of Stuttgart. The brigade has four subordinate units: the 1st Battalion, 41st Field Artillery, also located in Schwaebisch Gmuend; the 1st Battalion, 81st Field Artillery, located in New Ulm, about 50 miles southeast of Stuttgart; the 3d Battalion, 84th Field Artillery, located in Neckarsulm, about 50 miles north of Stuttgart; and the 2d Battalion, 4th Infantry, with headquarters and one line company located in Ludwigsburg, 15 miles north of Stuttgart, and two line companies colocated with their supported battalions.

The 2d Battalion, 4th Infantry, is the only infantry unit in the United States Army that is organic to an artillery unit. This is an indication of what the 56th Brigade is all about—teamwork. The brigade is one of the few units in the Army to employ as many as 74 different enlisted MOS's, from clerks and medics to topographic-instrument repairmen and helicopter technicians. The brigade is really a combined arms team, drawing manpower not only from artillery but also from infantry, signal, engineers, and ordnance. For example, soldiers from the Signal Corps might have MOS 26L, tactical microwave systems repairman; the Corps of Engineers supplies a number of MOS's, such as 52B, power generator equipment operator/mechanic; the Infantry Branch is represented by MOS's 11B, 11C, and 11F. Unlike most units, the brigade has, within its Pershing battalions, organic direct support capabilities that enable quick repair of most of its equipment.

The Pershing missilemen, however, are those who are

directly responsible for insuring that the Pershing mission is accomplished. They complete their advanced individual training at Fort Sill, Oklahoma. This 8-week AIT course is designed to familiarize MOS 15E personnel with the various components of the Pershing system and introduce them to the specialized job skills required by Pershing. Upon graduation, selected personnel attend the Pershing Laying Specialist Course to acquire more advanced knowledge of the unique system for gaining direction for the missile. The most advanced systems course taught at Fort Sill is the Pershing System Maintenance Course for selected warrant officers and enlisted specialists. Noncommissioned officers prepare for their supervisory responsibilities by attending the Pershing Noncommissioned Officer Course. The Pershing equipment studied in these courses includes the erector-launcher, a combined launching platform and transporter for the missile; the programmer-test station, which contains the system computer and solves the gunnery problem; the power station, which provides high-pressure and conditioned air and all electrical power for the system; and the battery control central, an expandable van used as the command and control center.

As mentioned above, teamwork plays an important part in the 56th Brigade. The intricacies of the Pershing system demand that members of the brigade know their jobs thoroughly, and those who work directly with the missile itself, with few exceptions, must be able to move from one job to another with proficiency. This teamwork extends to everyone in the brigade, for without the assistance of the various support personnel, the equipment wouldn't operate for very long. In addition to cooperation and teamwork, training plays an important part in the 56th Brigade soldier's routine. Garrison training, periodic field training exercises, and duty at the combat alert status (CAS) site, where firing batteries are on 24-hour alert, help to maintain the high state of readiness required by Pershing's mission in Europe.

In many respects, the culmination of training in Europe is the artillery/ordnance and operational test firings that take place in Utah and Florida. For these tests, selected units in Europe return to CONUS for actual firing of the Pershing missile. The artillery/ordnance firings, conducted to test equipment improvements, take place at Blanding and Green River, Utah. For the operational test firings, the crews, missiles, and related support equipment are taken intact from the CAS site and transported to Patrick Air Force Base, Florida, home of the Air Force Eastern Test Range, where the missiles are fired just as they would be in Europe. No one knows who will be "tapped" for an operational test, and this keeps the crews on their toes.

Being a member of the brigade does not mean all work

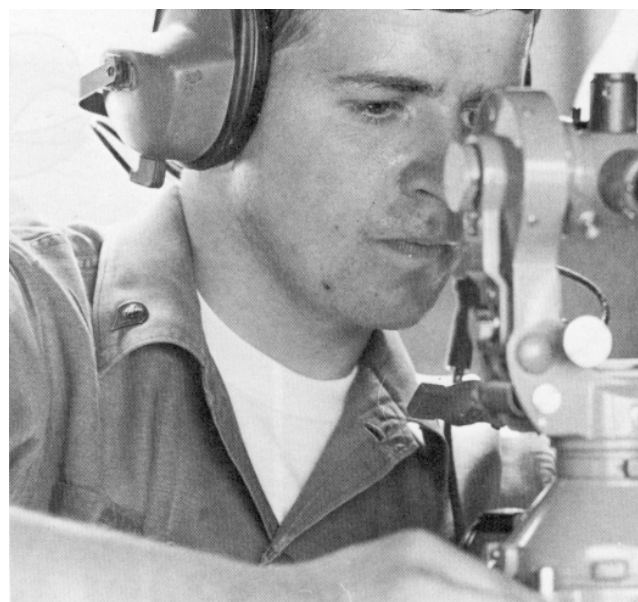


PHOTO COURTESY OF STARS AND STRIPES

The azimuth laying specialist carefully aligns the Pershing on the firing azimuth.

and no play. Travel to the many nearby countries occupies much of the soldier's off-duty time. Armed with a 3-day pass, a soldier can see many of the wonders of "old world" Europe.

In addition to private travel, members of the brigade can take advantage of the "Pershing R&R Program," whereby 3-day passes are authorized and transportation is made available to take the soldiers and their wives to an Armed Forces recreation center at Berchtesgaden, Garmisch, or Chiemsee in the Bavarian Alps. Also available to members of the command is the Berlin Orientation Tour, which includes a week of administrative leave in Berlin to see the sights.

"Quick, Reliable, Accurate," the motto of the 56th Field Artillery Brigade, is appropriate to the teamwork that encompasses all members of the brigade. The Pershing system is one of the primary deterrents to worldwide conflict. The officers and men of the 56th Brigade realize this, and they work hard to get the job done. When they can, they take the opportunity for travel and new experiences; but above all, they accept the responsibility that is theirs. ☒

SP5 Alan C. Jacobson, a native of Wilmington, Delaware, received his BS in radio and television production from Ithica College, Ithica, New York, in 1971. He took his advanced individual training at Fort Sill and is presently assigned to the 56th Artillery Brigade in Germany.



The Artillery of the Federal Republic of Germany

by

LTC Gerhard U. Dobbert

The German artillery provides the firepower for the defensive land forces of the Federal Republic. It is fully integrated into the ground combat organizations at brigade, division, and corps levels. As a North Atlantic Treaty Organization member, the Federal Republic conducts joint defensive operations with other NATO forces. These operations are facilitated by common equipment, integration of German forces into the NATO command, and thorough training of these forces to support NATO operational plans. The forward geographical position of the

Federal Republic in the NATO defense scheme heightens the criticality of target acquisition and high mobility weapon systems. German tactical organizations must be highly flexible in order to adapt to changing role and mission requirements. In addition, the high population density of the area requires detailed coordination and control of fire support to minimize noncombatant casualties and facilitate destruction consistent with mission accomplishment.

The German artillery may be best described along

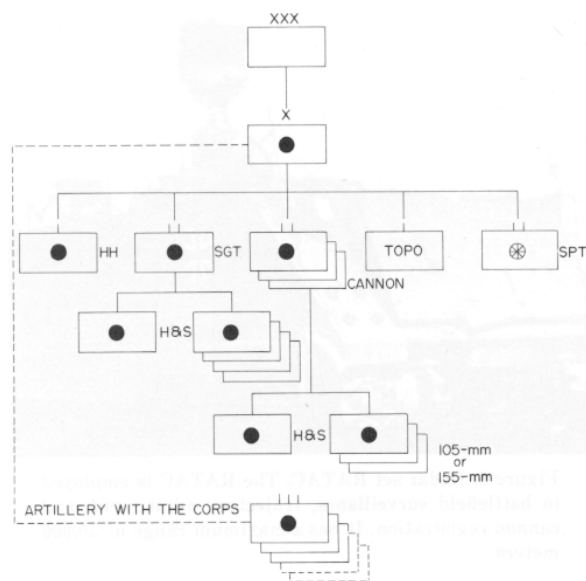


Figure 1. Corps artillery organization.

functional lines. It consists of artillery command staffs at corps, division, and brigade levels; firing artillery consisting of rocket artillery, armor artillery (self-propelled), field artillery (towed), and mountain artillery; and target acquisition artillery with sound ranging, flash ranging, radar, and drone systems. All cannon battalions contain three batteries, each of which has six cannons.

The corps artillery for each of the three corps in the

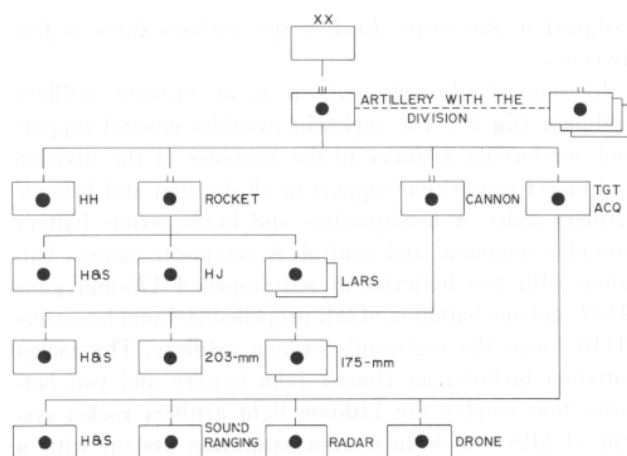
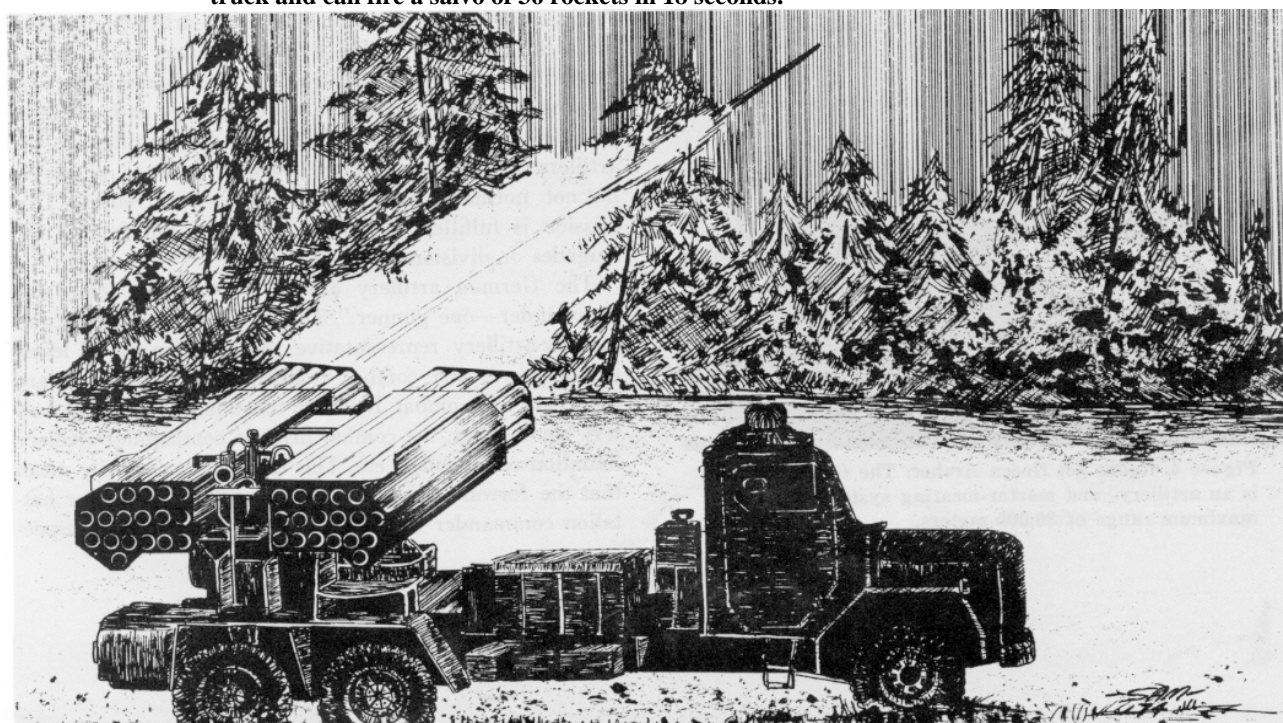


Figure 2. Division artillery organization.

German Army is divided into headquarters control, firing, and support elements (fig 1). The corps artillery headquarters and headquarters battery contains command, fire direction, communication, and service elements for the corps artillery commander. One missile battalion with four Sergeant systems (soon to be replaced by Lance) provides general support to the corps. Three cannon battalions provide reinforcing artillery to the divisions of the corps. Service elements consist of a topographical battery and a support battalion. The topographical battery conducts, records, and coordinates corps artillery survey operations, prints maps, and distributes maps and survey data to corps units as required. The support battalion transports, maintains, and secures special ammunition

Figure 3. Light artillery rocket system (LARS). The LARS is mounted on a 7-ton truck and can fire a salvo of 36 rockets in 18 seconds.



assigned to the corps. Each corps contains three to five divisions.

In support of each division is an organic artillery regiment (fig 2). The regiment provides general support and reinforcing artillery to the brigades of the division and target acquisition support to all division and brigade artillery units. A headquarters and headquarters battery provides command and control. A composite cannon battalion with two batteries of self-propelled 175-mm guns M107 and one battalion of self-propelled 203-mm howitzers M110 forms the regiment's cannon artillery. The rocket battalion includes an Honest John battery and two batteries that employ the 110-mm light artillery rocket system (LARS), a 36-tube area saturation system with a range of 15,000 meters (fig 3). The target acquisition battalion provides a highly centralized target acquisition capability to division artillery units. It contains three batteries. The sound ranging battery employs the sound ranging system 064. The radar battery employs two Green Archer self-propelled artillery- and mortar-locating radar sets (fig 4) and two RATAAC self-propelled moving-target-locating radar sets (fig 5). The drone battery employs 12 drone aircraft, each equipped with two cameras that provide a day-night photographic capability for deep surveillance of the battle area (fig 6).

Each brigade has an organic direct support artillery battalion (fig 7). Each armor, mechanized, and light infantry brigade artillery is equipped with three batteries employing the self-propelled 155-mm howitzer M109G, which is a German modification of the US M109. The brigades of the mountain artillery division are equipped with the lightweight 105-mm mountain pack howitzer.

Each battery fire direction center has a battery computer

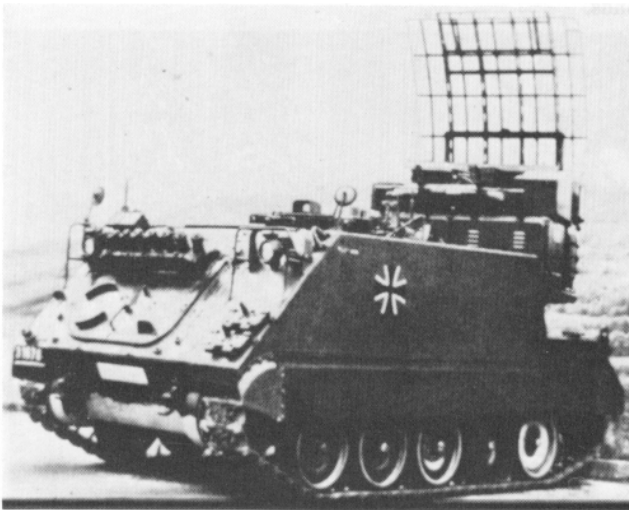


Figure 4. Radar set Green Archer. The Green Archer is an artillery- and mortar-locating system and has a maximum range of 30,000 meters.

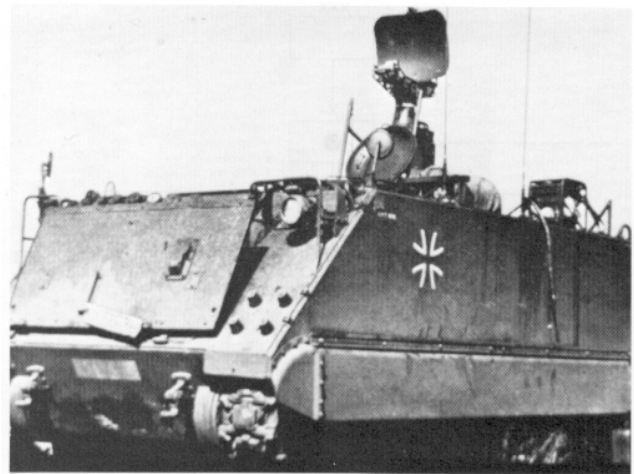


Figure 5. Radar set RATAAC. The RATAAC is employed in battlefield surveillance, trajectory adjustment, and cannon registration. It has a maximum range of 20,000 meters.

and can calculate its own fire commands. This allows the battery to operate independently from the battalion fire direction center.

The commander of a direct support battalion acts as an advisor to the maneuver force commander for the employment of all organic and attached artillery units. His fire coordination responsibilities include the heavy mortars of the infantry. His place is normally with the brigade commander. In his absence he is represented by the deputy battalion commander or the liaison officer. The battalion S2 is in the division artillery S2 radio net. Therefore, it is quite normal that the division G2 receives the most up-to-date information on the enemy and the battlefield situation more rapidly through artillery channels—from the forward observers to the battery commanders to the battalion S2's to the artillery regiment S2 to the division G2. The division artillery commanders expend a lot of effort and training in this reporting system because they know that responsive and effective reporting increases the influence and reliability of the artillery within the division. German forward observers do not normally act as forward air controllers. This mission is fulfilled by Air Force teams attached to the brigades or divisions.

The German artillery abides by the principle "one commander—one gunner." This is applied in force commander-artillery representative relationships at all levels of command—the combat company commander-forward observer, the combat battalion commander-artillery battery commander, the combat brigade commander-artillery battalion commander, etc. This does not necessarily mean that the forward observer or the artillery battery or battalion commander will be closely proximate to his respective

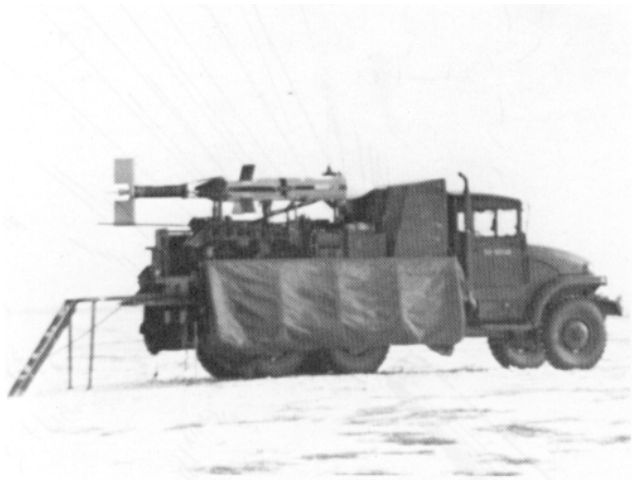


Figure 6. Photographic drone aircraft. A Canadian-developed system, the drone is launched from a truck mount and has a range of 100,000 meters.

combat company, battalion, or brigade commander, but that the artillery representative will have a permanent radio link with the force commander and will fully coordinate maneuver and fire support with him on a close and continual basis.

The development of artillery equipment in the Federal Republic includes automation, cannon material, ammunition improvements, and target acquisition system programs. An automatic data processing and digital data transmission system for command, fire direction, and firing battery use is currently being developed. This system will include equipment for the forward observers, fire direction centers, firing batteries, and artillery command posts. Cannon systems are being upgraded in range, rate of fire, and accuracy by the development of new towed and self-propelled 155-mm howitzers in a joint venture with Italy and England. The effectiveness of

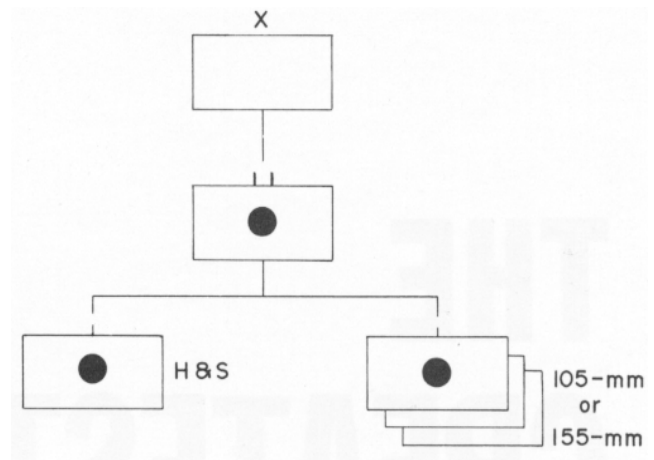


Figure 7. Brigade artillery organization.

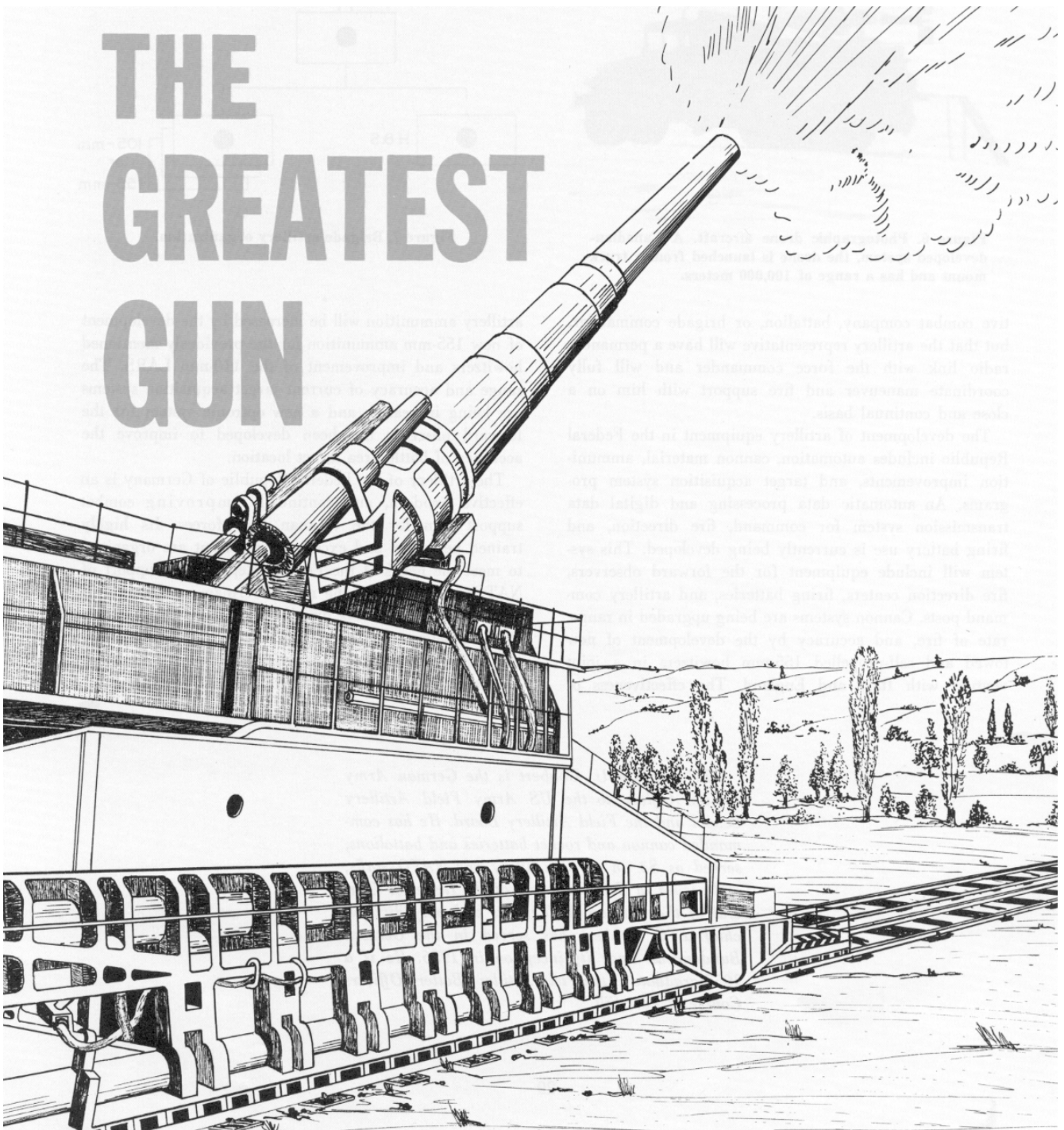
artillery ammunition will be increased by the development of new 155-mm ammunition for the previously mentioned howitzers and improvement of the 110-mm LARS. The range and accuracy of current target acquisition systems are being increased, and a new optronic system for the forward observer has been developed to improve the accuracy of battle area target location.

The artillery of the Federal Republic of Germany is an effective, modern, and continually improving combat support arm for the German land forces. Its highly trained personnel and excellent equipment are organized to meet the needs of the Federal Republic in support of NATO operations. As the major German contribution of firepower to the NATO punch, it is a potent and highly effective deterrent to armed aggression. As a flexible and responsive fire support means for the German Army, it can provide the needed support to land forces in combat.



LTC Gerhard U. Dobbert is the German Army Liaison Officer to the US Army Field Artillery School and the Field Artillery Board. He has commanded cannon and rocket batteries and battalions, served as S3 on corps artillery and NATO staffs, and served in the directorate of the Inspector General of the German Artillery as a deputy division chief. LTC Dobbert has served in the German Bundeswehr since its inception in 1956. He is a 1957 graduate of the Field Artillery Battery Officers Course at Fort Sill.

THE GREATEST GUN



An in-depth article on the greatest gun ever built – with previously unpublished photographs of the firing on Sevastopol.

by
MAJ Robert Edwards

There were worse places than Sevastopol, it seemed, for a Russian soldier in the late spring of 1942. True, the city was in its eighth month of siege, more than a hundred miles behind the German lines, but its defenders were occupying strong positions and they had just spent the winter in warmth and comfort compared to their comrades on the frozen northern fronts.

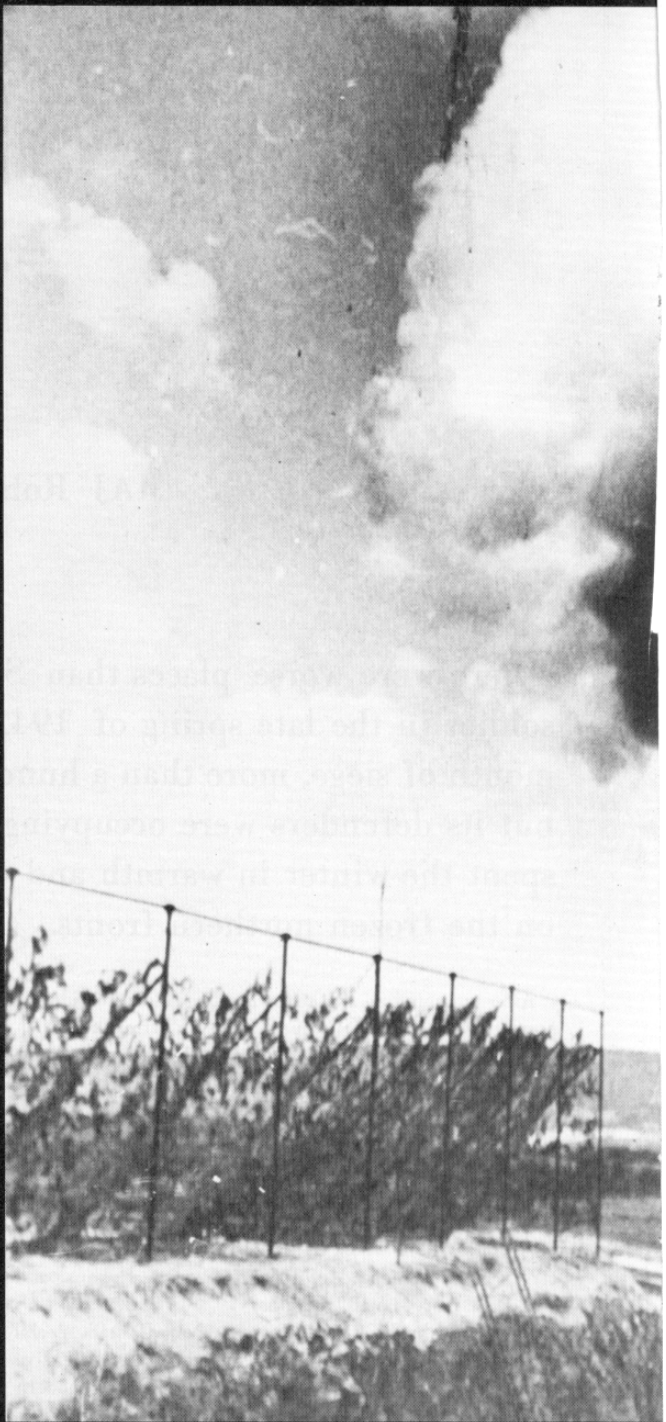
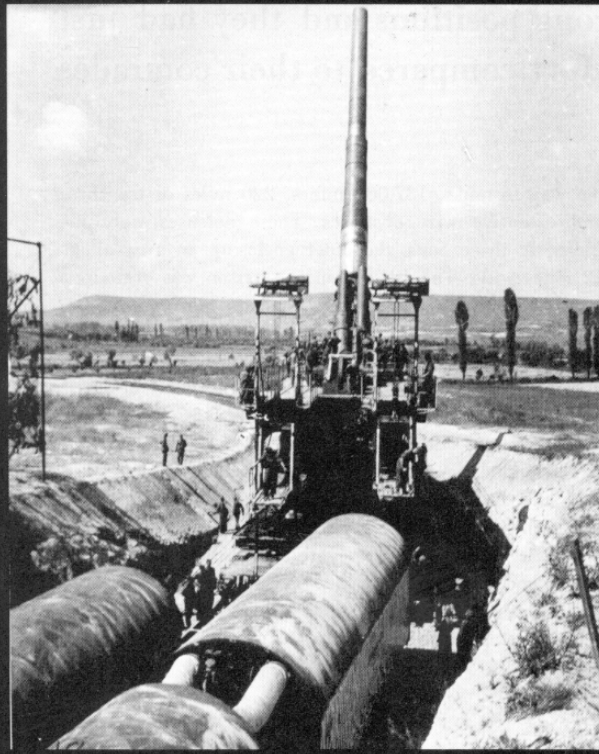
After surrounding the city from the landward side the previous October, the German Eleventh Army had been repulsed twice by Major General Ivan Petrov's forces, and the Russians had taken advantage of the winter months to further strengthen the vital seaport's formidable defenses.

Historically, a siege was nothing new for Sevastopol. Its older fortifications were constructed between 1806 and 1825, and these had shown great strength during the Crimean War when, in 1854 and 1855, they had held off an army composed of British, French, Italians, and Turks for more than 11 months.

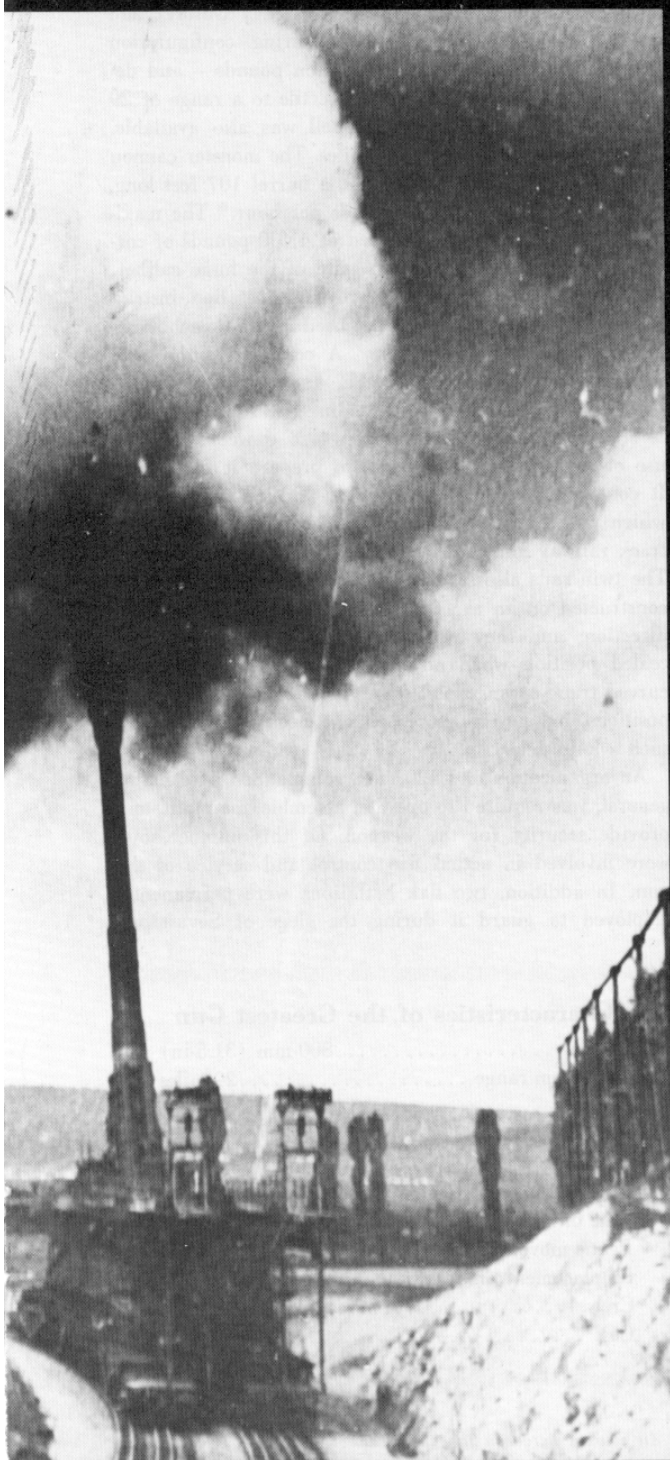
Beginning in 1939, the Russians had devoted special attention to modernizing and enlarging the defensive works. By 1942, the city was defended by 19 modern forts and 3,600 pillboxes and smaller permanent installations. Added to these were broad, deep ditches that barred the way to

tanks, 137,000 mines, 220 miles of trenches, and extensive wire obstacles. These defenses were installed in three belts, the outer enclosing an area about 12 miles wide. The 107,000-man garrison was organized into seven rifle divisions, five separate marine infantry brigades, and numerous smaller formations—some 70 battalions in all. German press accounts labeled Sevastopol "the strongest fortress of the world" and declared that neither the Maginot Line nor their own West Wall could compare with it.

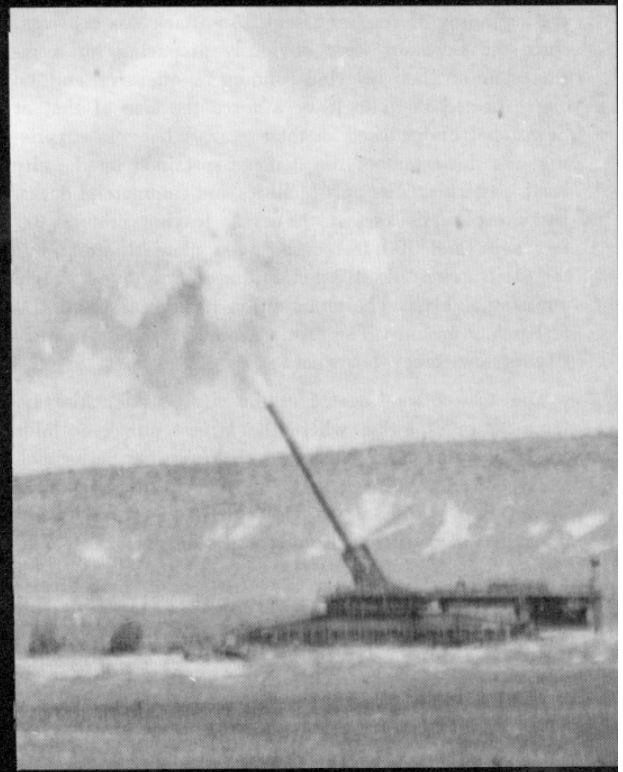
The manmade defenses were complemented by terrain that had little vegetation and sharp hills and ravines alternating across it. In spite of German air superiority, the Soviet Black Sea Fleet continued to deliver reinforcements and supplies at night. As in the Crimean War, the defenses of Sevastopol in 1942 had become a legend in the rest of Russia. Morale was high among the defenders,



The Siege of
19



Sevastopol
42





The muzzle of the Greatest Gun, which fired a 4-ton projectile a distance of 29 miles.

and it appeared that the city might hold out indefinitely.

The civilian population of 100,000 was living underground, but the arrival of spring and the blooms on the city's cherry trees made life almost normal. This idyllic situation was about to change, however.

At 0300 on 3 June, the fortress city was shaken by the massed fires of more than a thousand guns, clearly the beginning of another assault. An attack was expected, since the Germans were obviously preparing for a resumption of their previous summer's offensive and no one expected them to leave a force the size of that at Sevastopol undisturbed in their rear. What was surprising was the extent of the damage sustained by the city itself, particularly its port facilities and commercial docks. Huge explosions racked the area, leaving craters 100 feet wide and 100 feet deep. Even more stunning was the destruction of an ammunition dump by a single devastating blast. The ammunition had been stored 100 feet below ground! The city was under attack by a terrifying new force—but what?

The answer was located at the city of Bakhchisaray, some 20 miles away, where the largest gun ever built was firing projectiles as heavy as boxcars into Sevastopol. Designed and manufactured by the Krupp armament works, this leviathan was the culmination of 7 years' research and development and the descendent of the notorious "Big Bertha" that had flattened Belgian forts in 1914.

This now-legendary weapon was so enormous that difficulty arises in separating fact from fantasy when describing it. Originally known as "Heavy Gustav" and later as "Dora," the gun in its firing configuration weighed 1,350 tons—nearly 3 million pounds—and delivered a 4-ton high-explosive projectile to a range of 29 miles. A

7-ton armor-piercing shell was also available, with a maximum range of 13 miles. The monster cannon had a caliber of 800 millimeters, a barrel 107 feet long, and a rate of fire of three rounds per hour.* The maximum propelling charge consisted of 4,400 pounds of cordite and was 15 feet long. In spite of the huge caliber, a short shell case was used, to provide obturation, instead of the expanding rings normally used in the breechblocks of large and medium artillery. A complete round—the maximum charge, the projectile, and a ballistic windshield (ogive) fitted during loading—was 26 feet long.

The outsized weapon required 4 to 6 weeks and the use of a giant overhead crane to prepare it for action. It could be fired only from an 80-wheeled railroad car, which was so wide that it required a strengthened twin-track railway and had to be assembled at the firing site. The twin rails also served two other purposes: they were constructed on an arc that was used to lay the gun for direction, and they provided for movement to a concealed position when no firing was taking place. The curved track arrangement was typical of railway artillery positions, but never before had one been constructed on such a large scale.

An organization of 1,420 men, commanded by a major general, was required to operate, assemble, maintain, and provide security for the weapon. Of this number, 500 were involved in actual fire control and service of the gun. In addition, two flak battalions were permanently employed to guard it during the siege of Sevastopol,

Characteristics of the Greatest Gun

Caliber	800-mm (31.5-in)
Maximum range	29 miles
Weight	1,350 tons
Tube length.....	107 feet
Projectile weight.....	AP, 7 tons; HE, 4 tons
Propellant weight (max)	2.2 tons
Rate of fire.....	3 rounds per hour
Prime mover	Rail
Emplacement time	4-6 weeks
Crew	500
Cost	\$4 million

* All sources agree on the gun's caliber, but some discrepancies exist in listings of other characteristics. Where these occur, the most frequently listed or most modest figures are used.

although the Soviet air threat was negligible there.

The origin of this fantastic weapon can be traced to 1935, when the German Army Ordnance Office asked the Krupp organization to determine what weight and speed of projectile would be required to smash the massive defenses of the Maginot Line, which was then under construction. This inquiry resulted in preliminary blueprints for siege guns with calibers of 700, 800, and 1,000 millimeters.

Nothing further was done on the project until March 1936, when Hitler visited the Krupp works and asked about the giant gun's feasibility. He was told that such a weapon was theoretically possible although some problems could be expected in forging the huge parts needed for such a solid piece of ordnance.

Hitler did not issue any instructions at that time, but Krupp began preparing detailed plans and, in early 1937, discussed them with the army's experts. The 800-mm version had been selected by then, and high-ranking Wehrmacht officers, still smarting from the Kaiser's use of navy gunners to operate the famous Paris Gun in 1918, were very eager to receive their secret weapon.

Production of the huge weapon was well advanced when the war began, but technical difficulties prevented its completion in time for the drive against France in 1940. As a result of Hitler's continued inquiries about the project's progress, Krupp assigned it the highest priority, and early in 1941 the weapon was ready for its initial test firing. Later that spring it was fired again, this time at the Hugenwald range with Hitler and other top Nazi leaders as witnesses.

By this time, the only uses the army commanders could visualize for the gun were cross-channel bombardment (with the attendant risk of Royal Air Force intervention) and possibly against Gibraltar (if the Spanish would cooperate).

Nevertheless, the project was so near completion that there appear to have been no reservations about completing it—especially since Krupp was paying the development bill. As for the scarcity of targets, Hitler would soon solve that problem.

It is unlikely that the gun was ready for action by the time the Soviet Union was attacked. Even if it had been, its huge dimensions and lengthy preparation for firing would hardly have been consistent with Germany's covert buildup for the attack.

By the winter of 1941-42, the monster gun had been turned over to the army. Named "Heavy Gustav" by its builders—in honor of Gustav Krupp von Bohlen und Halbach, the husband of Big Bertha's namesake—the weapon had been completed at a cost of 10 million reichsmarks (\$4 million). The lines around Sevastopol had

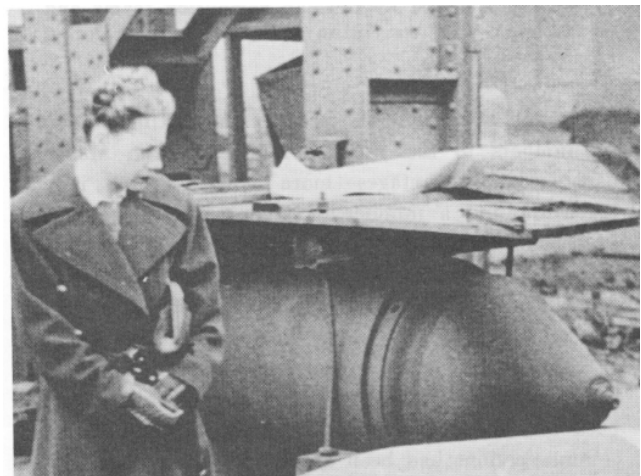
stabilized with the onset of bad weather, and it was apparent that the city could not be taken before spring, if then. Clearly, here was a suitable target for Heavy Gustav. Preparations were begun to move the gun to the distant battlefield.

In its traveling configuration, the gun and its associated equipment required 60 railroad cars. These were moved to the vicinity of Sevastopol in April and construction was begun on the massive firing mountings. By 3 June, when the bombardment began in preparation for the attack, Heavy Gustav was ready. One change had taken place. As often happens, the manufacturer's nickname had not survived after the equipment reached the troops. By the time the gun went into action, it had been rechristened "Dora" by its crew. The identity of the original Dora is uncertain.

Though the gun had been designed for attacking fortified positions, its primary targets at Sevastopol were the port facilities within the actual city. Its accuracy had apparently proved insufficient for attacking point targets. The slow rate of fire made adjustment of fire by observers impractical, so a system of "mapshooting"—applying all possible corrections and firing without observation at a grid location—was used. This required large area targets, such as the harbor area. Destruction of the underground ammunition dump was probably just a lucky shot.

While the Sevastopol garrison was strengthening the city's defenses during the winter, the Germans also had been busy. Colonel General Erich von Manstein, author of the plan that had broken France's defenses 2 years earlier, was commanding the Eleventh Army, and he had two Rumanian and seven German divisions ready for

Two shells of the type used in the siege of Sevastopol.





The greatest gun on a siding near Grafenwoehr. When found by Major Busbee, the weapon had been heavily damaged by German demolition teams and the train itself was in an advanced stage of decay.

the assault by June. This force was approximately equal in numbers to the Russian force, but von Manstein had two vital advantages—more than 1,300 guns, including Dora and a number of other siege weapons, had been assembled, and the VIII Air Corps, with more than 600 aircraft, was in support. Against this, the Russians could muster 600 guns but only 53 aircraft. Other Soviet air units were too far away to provide any assistance.

After a 4-day artillery and air preparation, the Germans and their allies attacked. Sevastopol's air force had been knocked out of the fight by the second day and

communications had been damaged, but it was soon apparent that the defensive works and the soldiers who manned them had hardly been affected. Opposition was fierce, and the attack soon bogged down into a series of local battles. The German artillery and air superiority isolated the individual strong points and pinned down the Soviet reserves. With communications gone and no hope of reinforcement, thousands of pillbox and gun crews made their final stands in fights that, for the most part, are unrecorded.

The turning point finally came on 18 June, when Fort "Maxim Gorki" (as the German artillery observers had named it) fell. This massive strongpoint, more than 300 yards long by 40 yards wide, was constructed to a depth of three stories underground. Its main armament consisted of four 280-mm cannon mounted in two armored naval turrets. The fort had its own water and power supplies, field hospital, canteen, engineering shops, ammunition lifts, arsenals, and underground battle stations. Every room and corridor was protected by double steel doors that had to be blasted open individually. The zeal with which the fort was defended is best illustrated by the fate of its 1,000-man garrison—only 50 prisoners were taken, and these had all been wounded.

The fall of "Maxim Gorki" broke the backbone of Sevastopol's northern defenses. The Germans captured the northern half of the fortress and launched an amphibious operation across Severnaya Bay on the night of 28-29 June in conjunction with renewed infantry assaults from the east.

On 1 July, Fort Malakhoff, the dominating height on the eastern edge of the city, was captured. The capture of this fort had ended the earlier siege in 1855, and this was again the case in 1942. The city was occupied on 2 July and the final capitulation took place 2 days later, although isolated groups held out longer. The Germans reported losses of 27,000 killed, wounded, and missing compared to Russian losses of 30,000 killed and 90,000 captured. Some of these were undoubtedly civilians, as the total figure exceeds the number of military defenders.

But what of Dora? Realistically, the monstrous gun had contributed very little to the victory. About 40 rounds had been delivered, and these undoubtedly had considerable effect on their points of impact; however, this represented a poor return on the manpower and money invested.

The real heroes of Sevastopol, from the German viewpoint, were the infantrymen and combat engineers who had braved the Russian fire, placed demolitions against fortifications, and plunged into the ruins to dislodge the defenders. They suffered heavy losses, and it was their sacrifice that made the victory possible.



This 6-foot ballistic windshield (ogive) was used to protect the fuze from premature detonation.

Major General Petrov had escaped from the doomed fortress by sea on the night of 29-30 June. He was not criticized by his superiors and was later promoted and placed in command of an army group. Von Manstein was promoted to field marshal following his army's victory at Sevastopol. He survived the war, remaining on the Eastern Front for its duration.

Dora's subsequent history is not so well documented. Some of the siege artillery at Sevastopol was moved to Leningrad, but Dora apparently was not included. There are reports that the gun was used to fire about 30 rounds in the vicinity of Warsaw in 1944, but this action is denied by other sources. Early stories of the weapon also suggest that it was used to attack targets across the English Channel, but this is unlikely in view of the Western Allies' air capability and the absence of substantiating data.

German references to Heavy Gustav and Dora led postwar historians to believe at first that at least two identical 800-mm weapons existed. The US Third Army discovered one (with a spare barrel) near Grafenwoehr, partially destroyed and resting on the remnants of 14 railroad cars. The Ninth Army found an additional barrel and some ammunition in the remains of the Krupp factory at Essen. It was also suspected that another of the giant guns might have been captured by the Russians.

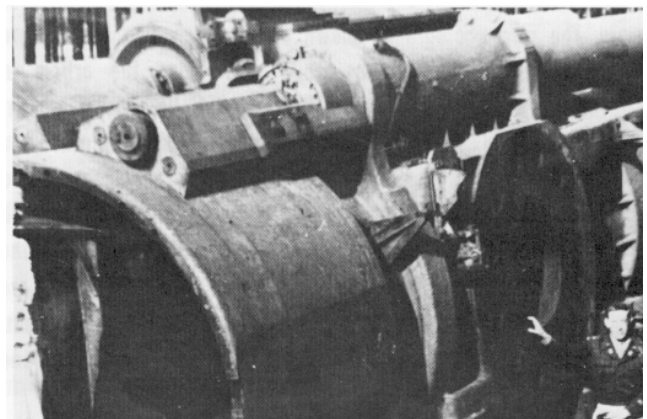
There are a few dissenters, but most researchers now agree that only one 800-mm gun ever existed and that it bore the names "Heavy Gustav" and "Dora" at different times. Surprisingly, recent historians have overlooked the gun discovered in the Grafenwoehr area—although it is

definitely verified by Third Army records and by eyewitness accounts and photographs (which, when compared with those taken by the Germans at Sevastopol, leave no doubt that it is at least the same model as was used in the siege). These annalists' reports conclude that either the materials found at Essen were the remains of Dora or she simply vanished (presumably in eastern Europe). The two-gun theorists account for both weapons with these explanations.

On the basis of evidence now available, it is this author's belief that only one of the giant guns ever was built and this was the one found by the Third Army near Grafenwoehr. The weapon parts recovered at Essen appear to have been just that—the remains of equipment used in development and testing, replacement parts for Dora, or components of additional weapons that Krupp hoped the army would order. It is very hard to believe that the gun would be returned to the factory after it had been accepted by the army and used in combat. The possibility that an additional gun was captured by the Red Army is also very remote. Until now, almost 30 years after the end of the war, no Soviet history has supported this idea, and it seems certain that the Russians—despite their penchant for secrecy—would surely have taken advantage of the propaganda value inherent in the capture of such a massive war machine.

Although Dora certainly survived the war, her ultimate fate is a mystery. Since she was located in the American occupation zone, she must have been destroyed under the supervision of US authorities, but, strangely, there seems to be no record of her final disposition.

The gun's sleigh and recoil mechanism mounted on its special flatbed railcar. The man is believed to be Major Busbee, who sent these photographs of the greatest gun to the Field Artillery School after the war.




There are undoubtedly former members of the occupation force who know what became of Dora, but their story has not been told; until it is, her disappearance will remain a riddle.

Another unusual aspect of the huge weapon's story is that its manufacturer never earned a pfennig from the project. After spending millions on its development, the gun's namesake (Gustav) presented it to Hitler as a gift (although there is no record that the Fuehrer ever acknowledged its receipt). Krupp undoubtedly expected to build additional copies of the behemoth—at a selling price of 7 million reichsmarks each—but the army had seen enough at Sevastopol to conclude that no more were needed.

Dora's statistics are certainly impressive and the damage she caused to Sevastopol's dock was massive, but what was her actual military value? Historically, this greatest of guns occupies the same position as Japan's Yamato-class battleships of the same era—a conventional weapon enlarged to gigantic, superdimensional proportions. Matched against other weapons of her type, Dora would have been invincible; but at the time she was built she was already as obsolete as the dodo. An emplacement time of 4 to 6 weeks and a proportional period for displacement would make any weapon almost useless in a war involving any movement, particularly against an enemy equipped with an effective air force (the Germans had complete air

supremacy at Sevastopol in 1942). In addition to its vulnerability, the weapon delivered a small volume of fire in return for its huge cost, though this was largely unobserved. That Dora was used only once (or twice, depending on the source) is very significant.

The enormous weapon also failed to achieve any important psychological effect. In 1918, life in Paris had been paralyzed when the city was attacked by the Paris Gun from a range of 70 miles. News of the Paris bombardment spread rapidly through all the Allied capitals, and military resources were diverted from other missions on a priority basis to deal with the long-range menace. Dora never accomplished anything on this scale. She merely added her weight to more than a thousand other cannon already bombarding every part of Sevastopol and, while this weight was massive, it is doubtful that more than a few of the city's defenders even knew she existed. In fact, her existence remained generally unknown to the Allies until after the war.

Still, from an artilleryman's point of view, Dora really must have been something to see. Considering her place as history's greatest gun and the certainty that nothing like her will ever be built again, it has to be considered a minor tragedy that she wasn't preserved for display at Fort Sill or Aberdeen. 

MAJ Robert R. Edwards has a BA in journalism from Arkansas Polytech and is a graduate of the Field Artillery Officer Advanced Course. He was assigned as battalion, division artillery, and division G3 advisor in Vietnam and has also served in Germany and at Headquarters, Department of the Army. Major Edwards is presently assigned to the Gunnery Department of the Field Artillery School.

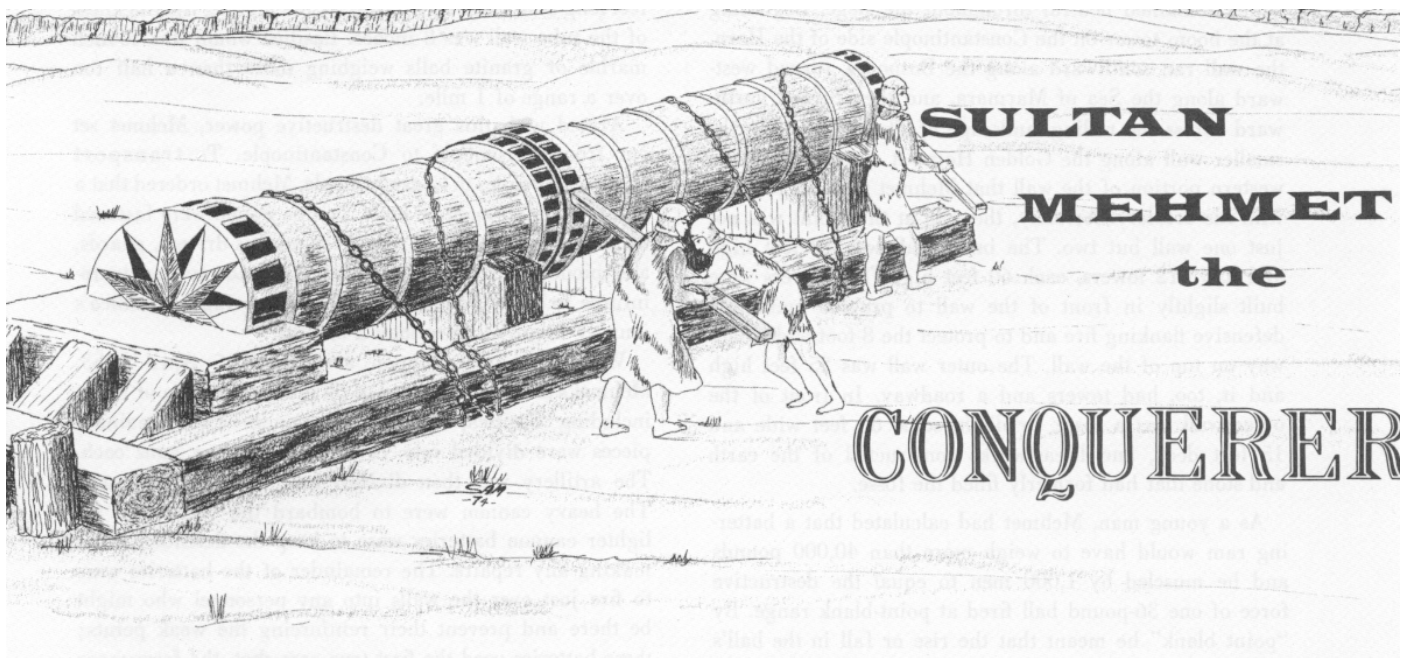
The rare photographs shown on the preceding pages were discovered by the author while researching the article in the Morris Swett Technical Library at the US Army Field Artillery School. The collection of 28 photographs was attributed by library records to Major Busbee, who sent them to the School shortly after World War II. The man in the photograph on page 37 is believed to be Major Busbee; none of the females were identified. The photographs of the gun firing are logically assumed to be copies of captured German photographs.

The Ordnance Museum, Aberdeen Proving Grounds, has one

of the shells of the giant gun, but museum personnel knew of no one who could say with certainty what happened to the gun after the war.

The German Liaison Officer at Fort Sill is forwarding a copy of the article to German military historians in an attempt to determine the fate of the greatest gun that was ever built.

If anyone, particularly veterans of the US Third Army, has any information about the giant gun, please contact the editor of the JOURNAL.



by
CPT Burt A. VanderClute II

Few modern artillerymen are aware of or appreciate the contributions made to cannon artillery by Sultan Mehmet (or Mohammed) II (1430-1481). Known as "the Conquerer" because of his conquest of the great walled city of Constantinople, Mehmet has been called by J. F. C. Fuller "the first really great gunner in history." Among his innovations are the first coordinated use of huge siege guns, the first use of indirect high-angle fire employing a forward observer to spot and adjust the impacting rounds, and the first use of true case, or cannister, shot.

To understand the originator of these artillery techniques, some knowledge of Mehmet's background is necessary. He was the eldest son of Sultan Murat II. His mother was a beautiful slave girl of Albanian origin. Mehmet was of average height but was strikingly handsome and highly intelligent. Educated alternately by his stepmother, Mara

Branhovich, and his tutor, Jacobo of Gaeta, an Italian Jew, the young Sultan became master of six languages, mathematics, and history. He was especially impressed by the great generals of antiquity—Alexander, Cyrus, Caesar, and Hannibal. It is recorded that when he was in his teens, he told his tutors that he wished to conquer more land and see more things than the great Alexander and Julius Caesar. This wish came true, and much of the credit is due to the Sultan's creativity in, and extensive use of, artillery.

Mehmet's father died in 1451, and Mehmet rushed to Adrianople (now Edirne in Western Turkey) to become sultan at the age of 21. Almost immediately he set about planning the fall of Constantinople. His father had laid siege to the city earlier, but Emperor Constantine and the Byzantines had survived. Mehmet believed that the key to conquering the city lay in the destruction of the city's walls.

Thirteen miles of wall surrounded the city. Four miles of the wall ran along the northern portion of the city and

bordered on the Golden Horn, an inlet of the Bosphorus. This portion of the wall, being only about 25 feet high, was of less substantial construction than the remainder. A boom of heavy chain and floating logs prevented access to the Golden Horn, headquarters of the Byzantine fleet. This boom could be raised and lowered through the use of two towers, one on either side of the inlet. On the northern side of the Horn was the city-state of Galata, which remained neutral throughout the siege. Beginning at the boom tower on the Constantinople side of the Horn, the wall ran southward along the Bosphorus, turned westward along the Sea of Marmara, and then turned northward across the rolling landscape of Thrace to rejoin the smaller wall along the Golden Horn. It was the landward western portion of the wall that Mehmet planned to force with his artillery. Actually, the wall at this point was not just one wall but two. The inner wall was 40 feet high and had 112 towers, each 60 feet high. The towers were built slightly in front of the wall to provide maximum defensive flanking fire and to protect the 8-foot-wide roadway on top of the wall. The outer wall was 25 feet high and it, too, had towers and a roadway. In front of the outer wall was a fosse, or ditch, some 60 feet wide and 15 feet deep, and breastworks constructed of the earth and stone that had formerly filled the fosse.

As a young man, Mehmet had calculated that a battering ram would have to weigh more than 40,000 pounds and be muscled by 1,000 men to equal the destructive force of one 36-pound ball fired at point-blank range. By "point blank" he meant that the rise or fall in the ball's trajectory would not exceed the ball's diameter. He knew that if he could cast a cannon of sufficient size, the walls would present no problem. As fortune would have it, a Christian renegade named Urban volunteered his services as an artillerist and cannon maker. Hammer-Puigstall relates the following interview, which took place at Mehmet's headquarters in Adrianople:

Mehmet: Can you cast a cannon that will shake the walls of Constantinople?

Urban: I can cast cannon of any caliber whatever and reduce to dust the walls of Constantinople even as those of Babylon. I am sure of my art. But I cannot determine how the pieces shall be transported.

Mehmet: Commence the casting. The transportation will be decided upon later.

Urban immediately began work on a half-scale model of the great bombard he envisioned would crumble the walls of Constantinople. When the model was finished, he offered to demonstrate it for the Sultan, and his first shot sank a Venetian ship that had drifted within range. The Sultan was elated at the effectiveness of the gun's first round and ordered that work on the great gun begin

immediately.

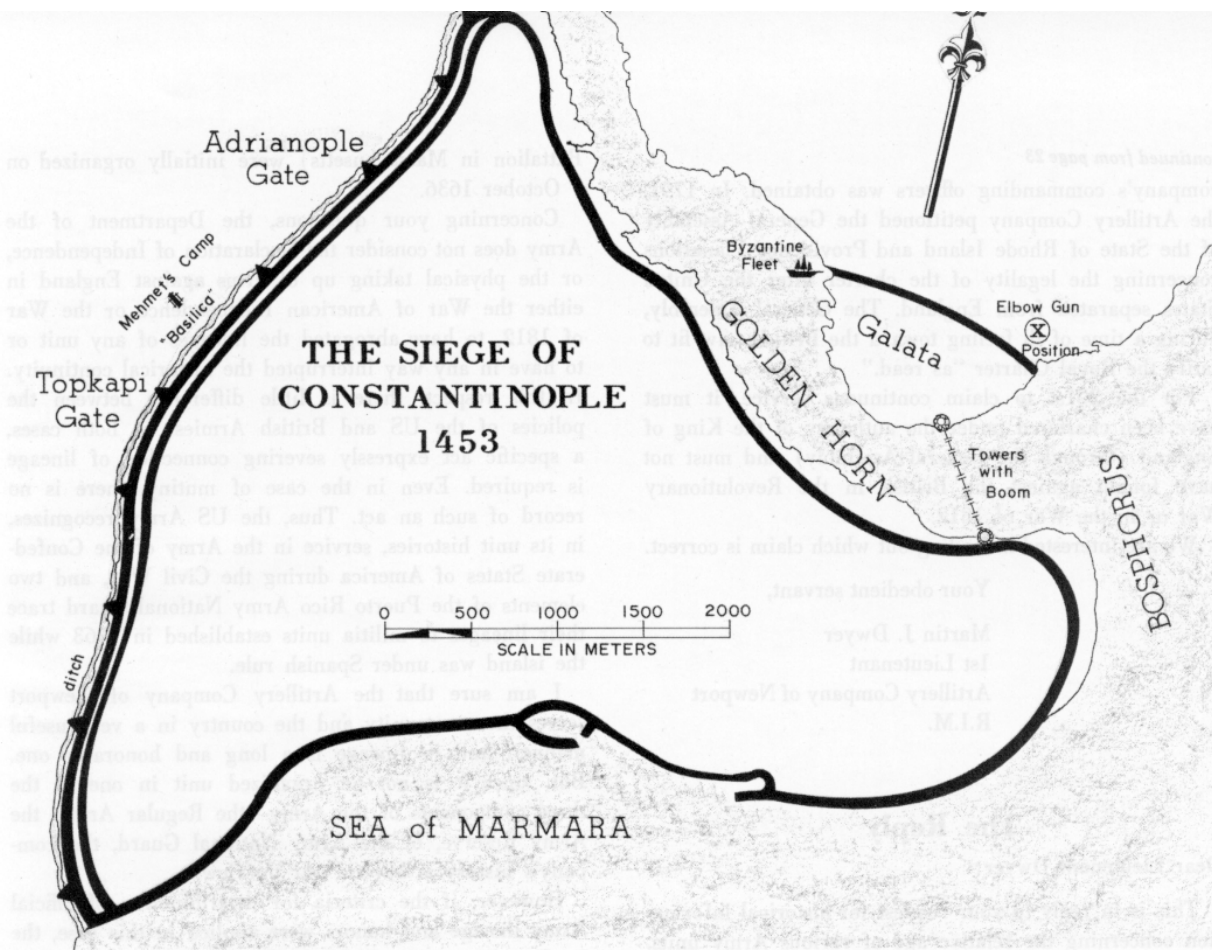
The casting required many days and enormous quantities of bronze and steel. When finally the metal had solidified, the clay casts were broken and the great gun was exposed. Steel bands were placed around the piece to add strength, and then the whole was polished until it gleamed. When finished, "Basilica," for so it was named, was 32 feet long and weighed 17 tons. At the muzzle, the thickness of the tube wall was 8 inches. Basilica would fire 40-inch marble or granite balls weighing more than a half ton over a range of 1 mile.

Armed with this great destructive power, Mehmet set out from Adrianople to Constantinople. To transport Basilica 150 miles to Constantinople, Mehmet ordered that a giant, flexible wagon be built. To this wagon were fastened 60 oxen. More than 500 men were used as drivers, guards, and pioneers to widen and level the roadway and to reinforce existing bridges or build new bridges. Basilica's journey required more than 2 months.

When the great cannon arrived on 5 April 1453, Mehmet's artillery consisted of 69 pieces. Thirteen of these, including Basilica, were large cannon. The remaining pieces were divided into 14 batteries of four guns each. The artillery was then divided into three main groups. The heavy cannon were to bombard the walls, and the lighter cannon batteries were to keep the defenders from making any repairs. The remainder of the batteries were to fire just over the walls into any personnel who might be there and prevent their reinforcing the weak points; these batteries used the first true case shot, the forerunner of cannister—hollow balls filled with stone and metal fragments that would scatter when the balls exploded on impact. When all was ready on 12 April, Sultan Mehmet gave the order and thus began the first great organized bombardment in history.

The roar of the cannon was deafening. The earth trembled and ships at anchor in the Golden Horn tossed on the chains. Due to the huge size of the great guns like Basilica and the logistics involved in their loading and aiming, these could be fired only six to eight times a day. But these guns caused their share of damage. Great cracks appeared in the walls where the cannon had struck. The Byzantines knew it was only a matter of time before the walls, and thus the city, would fall.

As the bombardment continued, Mehmet became impatient. On his tours of the battle area, he noticed that the Byzantine fleet was still at anchor in the Golden Horn. He ordered his commanders to fire on the fleet with their cannon. They explained that this was impossible because the walls of Galata prevented a clear shot. The author Kritovoulos relates that the Sultan then explained the need for a new type of cannon that would fire indirect plunging




fire. This cannon would be positioned and aimed according to mathematical laws and would fire its shot at great heights. Mehmet drew a rough sketch of such a cannon, explained the mathematical theory involved to his gunners, and ordered that work begin on the project immediately.

When the cannon was ready, an officer was positioned on a nearby hill so that he could see the ships at anchor in the Golden Horn and relay corrections to the firing battery by means of hand signals. When the order to fire was given, the projectile flew quickly from the newly cast "elbow gun" and reached great heights. This first shot was a near miss. The forward observer relayed his corrections and the second round struck a vessel amidships, sinking it immediately. Thus the first planned use of indirect high-angle fire brought a new use of artillery to the battlefield.

The great bombardment of Constantinople, which had begun on 12 April 1453, lasted for 47 days. Many sections of the city walls had been reduced to dust, but the great breakthrough into the city occurred at Topkapi (Turkish for "artillery gate"). Constantinople had fallen to the Turks, and Mehmet's conquest was due in great part to his organized use of artillery.

Among his innovations in the use of artillery were the first use of case shot, the first great organized

bombardment, and the first use of precision high-angle fire. Urban had kept his word to cast a cannon large enough to reduce the walls of Constantinople to rubble, but it was Sultan Mehmet the Conquerer who first dreamed of the great power of artillery and then made the dream come true. A new concept of war was given the world. As Fairfax Downey wrote, quoting Oman: "The capture of Constantinople by Mehmet II was probably the first event of supreme importance whose result was determined by the power of artillery." 

CPT Burt A. VanderClute II, a 1967 graduate of Rutgers University, attended OCS and received his commission at Fort Sill. He graduated from the Field Artillery Officers' Advanced Course in October 1973. Captain VanderClute studied Turkish at the Defense Language Institute, Monterey, California, and served two tours in Turkey and one in Germany. He is currently serving as aide-de-camp to the US Permanent Military Deputy, Central Treaty Organization, Ankara, Turkey.

continued from page 23

company's commanding officers was obtained. In 1791, the Artillery Company petitioned the General Assembly of the State of Rhode Island and Providence Plantations concerning the legality of the charter after the United States separated from England. The General Assembly, during a time of ill feeling toward the British, saw fit to ratify the Royal Charter "as read."

For the 201st to claim continuous service, it must have been chartered under the authority of the King of England (through the General Assembly) and must not have fought against the British in the Revolutionary War or in the War of 1812.

We are interested in finding out which claim is correct.

Your obedient servant,

Martin J. Dwyer
1st Lieutenant
Artillery Company of Newport
R.I.M.

The Reply

Dear Lieutenant Dwyer:

This is in reply to your request for historical information concerning the relative age of various Army units.

One of the primary functions of this office is the determination of lineages and honors of units in the Regular Army, Army Reserves, and Army National Guard, but we make no special attempt to determine the relative age of these various organizations. However, the oldest Regular Army unit (1st Battalion, 5th Field Artillery) dates back to March 1776, and the oldest Army National Guard

units (the 182d Infantry and 101st Engineer Battalion in Massachusetts) were initially organized on 7 October 1636.

Concerning your questions, the Department of the Army does not consider the Declaration of Independence, or the physical taking up of arms against England in either the War of American Independence or the War of 1812, to have abrogated the lineages of any unit or to have in any way interrupted the historical continuity. In this respect, there is little difference between the policies of the US and British Armies. In both cases, a specific act expressly severing connection of lineage is required. Even in the case of mutiny, there is no record of such an act. Thus, the US Army recognizes, in its unit histories, service in the Army of the Confederate States of America during the Civil War, and two elements of the Puerto Rico Army National Guard trace their lineages to militia units established in 1763 while the island was under Spanish rule.

I am sure that the Artillery Company of Newport serves the community and the country in a very useful manner, and its lineage is a long and honorable one. But, since it is not an organized unit in one of the three components of the Army—the Regular Army, the Army Reserve, or the Army National Guard, the company's history is beyond our purview.

However, if the criteria for determination of official Army lineage and honors were applied in this case, the 1st Battalion, 201st Field Artillery, would be the older of the two units.

We appreciate your interest in oldtime Army units and trust that the above answers your questions.

Walter L. McMahon
Colonel, Infantry
Chief, Historical Services Division
Office of the Chief of Military History



Downhill?

I would like to conclude my remarks by sharing with you a personal incident in my life. In 1953, while serving here at Fort Sill as a second lieutenant, I volunteered to go on a certain sensitive mission as an "observer." Within a few hours, I was on a military aircraft winging my way to Nevada. By noon the following day, I found myself in a trench in the middle of Frenchman Flats, Nevada. While a colonel briefed, a young soldier passed among us pinning on dosimeters. Lucky me! Now I find out that I am designated a "test troop" and they are going to pop an airburst atomic bomb over my head with my body a lot closer to ground zero than I found comfortable. Needless to

say, they got my attention! Well, somewhere in this story, there is a moral for you, and it's simply this: Get involved!!! The worst that can happen to you is that someone may drop an atomic bomb on your head. After that, everything is downhill.

The preceding remarks are from an address delivered 8 February 1974 to FAOBC Class 5-74 by COL Harvey D. Williams, Commander, 75th Field Artillery Group.